

## INTERNATIONAL COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

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Seoul 137-130 Republic of Korea

**PCT**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year)

29 JULY 2005 (29.07.2005)

Applicant's or agent's file reference

PCA50107-KIT

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/KR2005/001066**

International filing date (day/month/year)

**13 APRIL 2005 (13.04.2005)**

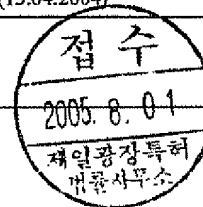
Priority date(day/month/year)

13 APRIL 2004 (13.04.2004)

International Patent Classification (IPC) or both national classification and IPC

**IPC7 C07C 251/44**

Applicant

**KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY et al**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR



Korean Intellectual Property Office  
920 Dunsan-dong, Seo-gu, Daejeon  
302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Date of completion of this opinion

28 JULY 2005 (28.07.2005)

Authorized officer

KIM, YONG

Telephone No. 82-42-481-8148



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/KR2005/001066

**Box No. I Basis of this opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
  
☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ on paper  
☐ in electronic form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in electronic form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2005/001066

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	<u>1-13</u>	YES
	Claims	<u>None</u>	NO
Inventive step (IS)	Claims	<u>1-13</u>	YES
	Claims	<u>None</u>	NO
Industrial applicability (IA)	Claims	<u>1-13</u>	YES
	Claims	<u>None</u>	NO

**2. Citations and explanations :**

Reference is made to the following documents

D1: WO 01/83451 8 NOV. 2001

D2: WO 01/66548 13 SEP. 2001

The present invention relates to indene derivatives which are capable of selectively modulating activities of peroxisome proliferator activated receptors (PPARs), and a method for preparing the same.

D1 and D2 which are considered to represent the most relevant state of the art, disclose indenyl and aza-indenyl derivatives respectively.

**1. Novelty and Inventive Step**

Although D1 discloses indenyl derivatives, the structure of the compounds of D1 is quite different from that of the compounds of the present invention in that the compounds of D1 and D2 bear a simple indenyl oxy(or indolyl oxy moiety) or diaza-cyclopenta[a]indenyl moiety, respectively, whereas the compounds of the present invention bear alkylimino-N-oxy-indenyl moiety.

Furthermore, the indenyl derivatives of the present invention exhibit a potent activity toward peroxisome proliferator activated receptors (PPARs) as well as an excellent effect in lowering both blood glucose and insulin level, when it is administered by either orally or intraperitoneally with no side effect.

Consequently, the subject-matter of the present claims 1 to 13 is considered to be novel and to involve an inventive step under Article 33(2) and 33(3) PCT.

**2. Industrial Applicability**

There is no reason for denying industrial applicability of these claimed invention. Consequently, claims 1 to 13 appear to meet the requirement of Article 33(4) PCT.